

Supplementary File 1

Dependent and Independent Variables, 2018-19 TCP India Survey

Dependent Variables	
Original variable/s	Recoded Variable
<p>Past and Present Cigarette Use Currently smoke cigarettes at least once a month Currently smoke cigarettes less than once a month Smoked cigarettes in the past but have since stopped Have never smoked cigarettes Refused/ Don't know</p>	<p>Combustible tobacco use (Cigarette and Bidi)</p> <ul style="list-style-type: none"> 0. Never used combustible tobacco (includes have never smoked cigarettes/bidi; refused/ don't know) 1. Life time combustible tobacco use (includes currently smoke cigarettes/bidi at least once a month and less than once a month, and smoked cigarettes/bidi in past but since stopped) <p>Successful quitting of combustible tobacco products among life time combustible tobacco users</p> <ul style="list-style-type: none"> 0. Successfully quit (includes Smoked Cigarette/Bidi in past but have quit) 1. Current user of combustible tobacco products <p>Smokeless tobacco use (Snuff, Gudhaku, Gul, Gutka, Khaini, Mawa, Mishri, Paan Masala with Tobacco, Paan Masala without Tobacco Betel Quid with tobacco, Betel Quid without tobacco, Chewing tobacco, Tobacco Tooth Paste, Zarda, Lal dant Manjan, Areca Nut)</p> <ul style="list-style-type: none"> 0. Never used smokeless tobacco (have never used smokeless tobacco, refused, don't know) 1. Life time smokeless tobacco use (includes currently use smokeless tobacco products/areca nut at least once a month and less than once a month, and used smokeless tobacco products/areca nut in past but since stopped) <p>Successful quitting of smokeless tobacco products</p> <ul style="list-style-type: none"> 0. Successfully quit (Used smokeless products (areca nut or smokeless tobacco products) in past but since stopped) 1. Current user of smokeless tobacco products/arecanut <p>Successful quitting of both smoking and smokeless tobacco products</p> <ul style="list-style-type: none"> 0. Successfully quit (Quit both smoking and smokeless tobacco) 1. Current user of both smoking and smokeless tobacco products
<p>Past and Present Bidi use Currently smoke bidis at least once a month Currently smoke bidis less than once a month Smoked bidis in the past but have since stopped Have never smoked bidis Refused/ Don't know</p>	
<p>How often do you use each of the following products (Snuff, Gudhaku, Gul, Gutka, Khaini, Mawa, Mishri, Paan Masala with Tobacco, Paan Masala without Tobacco Betel Quid with tobacco, Betel Quid without tobacco, Chewing tobacco, Tobacco Tooth Paste, Zarda, Lal dant Manjan, Areca Nut)</p> <p>Currently use at least once a month Currently use less than once a month Used smokeless products (areca nut or smokeless tobacco) in the past but have since stopped Have never used Refused Don't know</p>	
<p>Have you ever made a serious attempt to stop using cigarettes Yes No Refused Don't know Not applicable</p> <p>Have you ever made a serious attempt to stop using bidis Yes No Refused Don't know Not applicable</p> <p>Have you ever made a serious attempt to stop using all smokeless tobacco products including areca nut</p>	<p>Attempted to quit combustible tobacco products (bidi and cigarette) Yes No (includes No/Refused/Don't know/Not applicable)</p> <p>Attempted to quit smokeless tobacco products Yes No (includes No/Refused/Don't know/Not applicable)</p> <p>Attempted to quit both combustible and smokeless tobacco products Yes No (includes No/Refused/Don't know/Not applicable)</p>

Yes No Refused Don't know Not applicable	
Which of the following types of cessation help did you use as part of your most recent attempt to quit tobacco products (cigarette/bidi/smokeless tobacco/arecanut)? Nicotine gum Nicotine patch Bupropion Quitline Counselling mCessation Subscribe to government SMS cessation programme Visited cessation clinic Other Refused Don't know	Used cessation services in the latest quit attempt 0. Attempted quitting without cessation services (include others, refused, don't know) 1. Attempted quitting smoking/smokeless tobacco using cessation services. (includes nicotine gum, nicotine patch, bupropion, quitline, counselling, mCessation, subscription to gov. SMS cessation programme, and cessation clinic)
Visited health professional Yes No Not applicable Refused Don't Know Advice from doctor to quit tobacco Yes No Not applicable Refused Don't Know	Received healthcare provider quit advice among individuals visiting healthcare provider Yes No (includes no, not applicable, don't know)
Independent Variables	
Original variable/s	Recoded Variable
Age if the respondent at recruitment Year of recruitment	Age group 0. 15-39 years 1. 40-54 years 2. 55 years and above
Highest level of education Illiterate Little, no formal education Up to primary school Middle school Secondary school Graduate Post graduate/professional degree Above post graduate degree	Education level 0. Illiterate or no formal education 1. Primary and middle school 2. Secondary school 3. Graduate and above
Occupation Group Professional, technical and related workers Administrative, executive and managerial workers Clerical and related workers Sales workers Service workers Farmers, fisherman, hunters, loggers and related workers Craft and related trades Plant and machine operators Elementary Occupations	Occupational status 0. Not employed (includes students, currently have no job, house wife) 1. Employed (includes rest of the occupation groups representing employment status)

<p>Student Currently have no job Housewife Others</p>	
<p>Time to first smoke after waking 5 min or less 6-30 mins 31-60 mins More than 60 mins Refused/Don't know</p>	<p>Time to first smoke after waking 0. >30 minutes (also includes refused/don't know) 1. Within 30 minutes</p>
<p>Smoking cigarettes/bidi damaged your health Not at all A little A lot Not applicable/Refused/don't know</p>	<p>Perceived that smoking has damaged health 0. Not at all (includes not at all, not applicable/refused/don't know) 1. Little damage 2. A lot of damage</p>
<p>Time to first smokeless tobacco after waking 5 minutes or less 6-30 minutes 31-60 minutes More than 60 minutes Refused Don't know</p>	<p>Time to smokeless tobacco after waking 0. >30 minutes (also includes refused/don't know) 1. Within 30 minutes</p>
<p>Smokeless tobacco damaged your health Not at all A little A lot Refused Don't know</p>	<p>Perceived that smokeless tobacco has damaged health 0. Not at all (includes not at all, not applicable/refused/don't know) 1. Little damage 2. A lot of damage</p>
<p>Spouse thinks you should quit smoking Yes, a lot Yes, somewhat No Not Applicable Refused Don't Know</p>	<p>Spouse thinks you should quit smoking 0. No (includes no/not applicable/ refused/ don't know) 1. Yes, somewhat 2. Yes a lot</p>
<p>Spouse thinks you should quit smokeless tobacco Yes, a lot Yes, somewhat No Not applicable Refused Don't Know</p>	<p>Spouse thinks that you should quit smokeless tobacco 0. No (includes no/not applicable/ refused/ don't know) 1. Yes, somewhat 2. Yes a lot</p> <p>Spouse thinks that you should quit tobacco 0. No (includes no/not applicable/ refused/ don't know) 1. Yes, somewhat 2. Yes a lot</p>
<p>Anti-tobacco ads made you contemplate quitting tobacco More likely to quit using tobacco Less likely to quit using tobacco Made no difference Refused Don't know</p>	<p>Anti-tobacco ads made you contemplate quitting 0. No difference (includes made no difference, refused, don't know) 1. Less likely to quit 2. More likely to quit</p> <p>Anti-tobacco advertising motivated to quit 0. No difference/less likely to quit 1. More likely to quit</p>
<p>Smoking cigarette causes (Individual items with the responses-Yes; No; Not Applicable; Refused; Don't Know) Stroke Impotence Mouth Cancer Throat Cancer Lung Cancer</p>	<p>Awareness about health effects of smoking Each item was converted to binary responses with Yes recoded as "1" and rest recoded as "0". Sum of all 24 items was done to create a composite score ranging from 0-24</p>

<p>Heart disease Tuberculosis Harm to unborn Second hand smoke causes lung cancer Second hand smoke heart disease Second hand smoke asthma Second hand smoke harms unborn</p>	
<p>Smoking bidi causes (Individual items with the responses-Yes; No; Not Applicable; Refused; Don't Know)</p> <p>Stroke Impotence Mouth Cancer Throat Cancer Lung Cancer Heart disease Tuberculosis Harm to unborn Second hand smoke causes lung cancer Second hand smoke heart disease Second hand smoke asthma Second hand smoke harms unborn</p>	
<p>Smokeless tobacco causes (Individual items with the responses-Yes; No; Not Applicable; Refused; Don't Know)</p> <p>Stroke in users Mouth cancer in users Throat cancer in users Hear diseases in users Gum diseases in users Difficulty to open mouth in users</p>	<p>Composite score of Awareness about health effects of smokeless tobacco</p> <p>Each item was converted to binary responses with Yes recoded as "1" and rest recoded as "0".</p> <p>Sum of all six item was done to create a composite score ranging from 0-6</p>
<p>Smoking at home Smoking is not allowed in any indoor room inside home Smoking is allowed only in some rooms inside home No rules or restrictions Not applicable/Refused/don't know</p>	<p>Smoking at home</p> <ol style="list-style-type: none"> 0. Not allowed 1. Allowed in some rooms inside homes 2. No rules or restrictions (also include Not applicable/Refused/don't know)
<p>Health Status Poor Average Good Excellent Not applicable/Refused/don't know</p>	<p>Health Status</p> <ol style="list-style-type: none"> 0. Poor (also include not-applicable/refused/don't know) 1. Average 2. Good 3. Excellent

Supplementary file 2

Table 1: Unadjusted odds ratios reporting the factors associated with cessation behaviours among participants who exclusively use combustible or smokeless tobacco during the 2018-19 TCP India Survey.

Independent variables	Combustible tobacco ^a			Smokeless tobacco ^b		
	Successfully Quit (n=977) AOR (95% CI)	Quit Attempts ^c (n=881) AOR (95% CI)	Healthcare provider advice to quit (n=263) AOR (95% CI)	Successfully Quit (n=5806) AOR (95% CI)	Quit Attempts ^c (n=5125) AOR (95% CI)	Healthcare provider advice to quit (n=1240) AOR (95% CI)
Age group						
15-39 (ref)						
40-54	2.57 (1.51-4.39)*	1.21 (0.80-1.81)	0.92 (0.45-1.88)	1.03 (0.86-1.24)	1.02 (0.85-1.24)	0.72 (0.53-0.97)
≥55	1.17 (0.64-2.12)	1.34 (0.89-2.02)	0.79 (0.40-1.56)	1.50 (1.27-1.77)**	1.47 (1.24-1.74)**	0.95 (0.69-1.31)
Sex						
Female (ref)						
Male	1.00 (0.26-3.87)	5.83 (0.73-46.35)	0.27 (0.04-1.72)	1.04 (0.90-1.20)	0.95 (0.83-1.10)	1.00 (0.79-1.25)
Place of residence						
Urban (ref)						
Rural	1.03 (0.67-1.61)	0.72 (0.50-1.04)	0.84 (0.45-1.55)	0.46 (0.38-0.55)**	0.47 (0.39-0.58)**	0.88 (0.67-1.17)
Education level						
No formal education (ref)						
Primary and middle school	2.71 (1.28-5.77)**	2.33 (1.33-4.06)*	0.94 (0.44-1.97)	1.53 (1.26-1.85)**	1.51 (1.24-1.83)**	2.06 (1.25-3.39)**
Secondary school	2.34 (1.15-4.74)*	2.79 (1.58-4.91)**	1.30 (0.59-2.85)	1.55 (1.28-1.89)**	1.59 (1.30-1.93)**	1.89 (1.40-2.55)**
Graduate and higher	1.51 (0.73-3.12)	2.90 (1.56-5.37)**	0.76 (0.32-1.82)	0.76 (0.56-1.04)	0.84 (0.61-1.15)	1.70 (1.29-2.24)**
Occupational status						
Not employed (ref)						
Employed	0.59 (0.36-0.99)*	0.95 (0.60-1.52)	0.91 (0.47-1.79)	1.49 (1.29-1.73)**	1.39 (1.20-1.62)**	0.89 (0.71-1.12)
Tobacco use dependence ^a						
No (ref)						
Yes	NA	1.05 (0.76-1.45)	1.27 (0.74-2.17)	NA	1.54 (1.33-1.78)**	0.73 (0.58-0.92)**
Perceived that tobacco use has damaged health ^b						
Not at all (ref)						
Little damage	2.45 (1.51-3.97)**	2.44 (1.62-3.67)**	1.21 (0.54-2.71)	0.95 (0.81-1.11)	0.96 (0.82-1.13)	0.54 (0.42-0.70)**
A lot of damage	0.88 (0.52-1.49)	1.17 (0.79-1.72)	3.96 (1.77-8.86)**	1.09 (0.83-1.42)	1.26 (0.96-1.66)	0.52 (0.34-0.79)**

Awareness (Mean, SD) ^γ	1.13 (1.06-1.21)**	1.02 (0.99-1.05)	0.98 (0.93-1.03)	1.17 (1.12-1.23)**	1.18 (1.13-1.24)**	0.91 (0.86-0.97)**
Anti-tobacco advertising motivated to quit						
No difference/Less likely to quit (ref)						
More likely to quit	NA	2.15 (1.45-3.18)**	1.04 (0.52-2.02)	NA	2.34 (1.99-2.73)**	0.77 (0.59-1.00)
Partner thinks you should quit tobacco use ^δ						
No/Not applicable (ref)						
Yes, somewhat	NA	0.58 (0.32-1.03)	1.12 (0.51-2.47)	NA	1.02 (0.81-1.29)	1.28 (0.91-1.79)
Yes a lot		1.72 (1.17-2.54)**	1.37 (0.69-2.73)		2.56 (2.19-3.00)**	0.71 (0.55-0.91)**
Smoking at home						
Allowed (ref)						
Allowed with restrictions	2.00 (0.99-4.06)	0.72 (0.43-1.20)	0.40 (0.19-0.86)*			
Not allowed	5.00 (2.88-8.68)**	2.27 (1.59-3.24)**	1.09 (0.61-1.96)	NA	NA	NA
Health status						
Poor (ref)						
Average	0.95 (0.35-2.63)	0.33 (0.17-0.65)**	2.94 (0.94-9.17)	0.47 (0.33-0.68)**	0.84 (0.58-1.21)	1.42 (0.95-2.11)
Good	0.57 (0.23-1.40)	0.30 (0.16-0.57)**	3.48 (1.12-10.80)*	0.67 (0.47-0.95)*	0.60 (0.42-0.86)**	1.80 (1.21-2.69)**
Excellent	1.07 (0.44-2.61)	0.30 (1.14-0.67)**	2.34 (0.58-9.45)	0.97 (0.67-1.38)	0.46 (0.32-0.68)**	3.07 (1.83-5.17)**
Received quit advice from healthcare provider						
No/NA (ref)						
Yes	1.48 (0.93-2.35)	1.84 (1.27-2.66)**	NA	2.49 (2.06-3.04)**	2.49 (2.03-3.04)**	NA

^a Combustible tobacco users include individuals reporting use of cigarettes or bidi

^b Smokeless tobacco users include individuals reporting the use of gudhaku, gul, gutka, khaini, mawa, mishri, paan masala with tobacco, paan masala without tobacco betel quid with tobacco, betel quid without tobacco, plain chewing tobacco, tobacco toothpaste/paste, zarda, lal dantmanjan, areca nut or other smokeless tobacco products.

^c Quit attempts are defined as any serious attempts to stop smoking by a tobacco user reporting the use of tobacco products at least less than once a month

^a Tobacco use dependence was defined as time to use smoking/smokeless tobacco products within 30 minutes of waking.

^β Perception that combustible or smokeless tobacco products use has damaged health.

^γ Awareness was computed as a composite index of 24 items capturing the awareness about health effects of cigarettes and bidis (composite score of 0-24) for combustible tobacco users; and six items (composite score of 0-6) for smokeless tobacco users.

^δ Spouse/partner thinks that the respondent should quit smoking/smokeless tobacco products.

Note: The multivariable analysis was conducted employing binary logistic regression analysis *p-value < 0.05, **p-value < 0.01; ref= Reference category; TCP= Tobacco Control Policy India Survey; AOR= Adjusted Odds Ratio; CI= Confidence Interval; SD= Standard Deviation; NA= Not applicable. The variables a) Tobacco use dependence, b) anti-tobacco advertising motivated to quit, and c) partner thinks you should quit tobacco use were not measured among participants who successfully quit tobacco use as they were captured only among the current users; ‘Smoking at home’ was not included for the models capturing cessation outcomes across exclusive smokeless users.

Table 2: Unadjusted odds ratios reporting factors associated with cessation behaviours among mixed users surveyed in the 2018-19

TCP India Survey (n=1157)

Independent variables	Successfully Quit smokeless tobacco AOR (95% CI)	Lifetime mixed users Successfully Quit combustible tobacco AOR (95% CI)	Successfully Quit both AOR (95% CI)
Age group			
15-39 (ref)			
40-54	2.05 (1.09-3.86)*	1.63 (1.21-2.19)**	2.58 (1.28-5.19)**
≥55	4.21 (2.23-7.94)**	3.12 (2.26-4.30)**	6.03 (3.02-12.06)**
Sex			
Female (ref)			
Male	4.13 (0.54-31.66)	2.51 (1.18-5.33)*	2.09 (0.45-9.65)
Place of residence			
Urban (ref)			
Rural	1.10 (0.63-1.92)	0.94 (0.70-1.27)	1.64 (0.97-2.79)
Education level			
No formal education (ref)			
Primary and middle school	1.40 (0.71-2.76)	1.36 (0.94-1.96)	2.75 (0.95-7.96)
Secondary school	0.96 (0.44-2.07)	1.92 (1.31-2.81)**	5.18 (1.81-14.88)**
Graduate and higher	1.33 (0.54-3.24)	1.29 (0.79-2.11)	5.60 (1.79-17.52)**
Occupational status			
Not employed (ref)			
Employed	1.73 (0.74-4.06)	0.81 (0.57-1.15)	0.47 (0.26-0.85)
Perceived that tobacco has damaged health			
Not at all (ref)			
Little damage	1.16 (0.61-2.24)	0.98 (0.73-1.34)	2.06 (0.97-4.40)
A lot of damage	1.41 (0.83-2.39)	0.19 (0.13-0.28)**	4.12 (2.28-7.45)**
Health status			
Poor (ref)			
Average	0.72 (0.28-1.85)	1.14 (0.63-2.05)	0.83 (0.2502.71)
Good	0.76 (0.31-1.87)	1.17 (0.66-2.07)	1.11 (0.36-3.42)
Excellent	0.35 (0.10-1.28)	2.16 (1.15-4.06)*	2.50 (0.76-8.26)
Received healthcare provider advice to quit			
No/NA (ref)			
Yes	1.74 (0.95-3.16)	1.01 (0.70-1.45)	1.50 (0.79-2.84)

Note: The multivariable analysis was conducted employing multinomial logistic regression analysis *p-value < 0.05, **p-value < 0.01; ref= Reference category; TCP= Tobacco Control Policy India Survey; HCP= Healthcare provider; AOR= Adjusted Odds Ratio; CI= Confidence Interval

Table 3: Unadjusted odds ratio reporting factors associated with quit attempts and healthcare provider advice to quit among mixed users surveyed in 2018-19 TCP India Survey (n=604)

Independent variables	Current Mixed users (n=604) ^a			Visited HCP (n=167) ^b
	Attempted to quit combustible tobacco use AOR (95% CI)	Attempted to quit smokeless tobacco use AOR (95% CI)	Attempted to quit both AOR (95% CI)	Received HCP advice to quit AOR (95% CI)
Age group				
15-39 (ref)				
40-54	1.37 (0.56-3.33)	0.59 (0.33-1.05)	1.15 (0.57-2.32)	0.84 (0.40-1.77)
≥55	1.44 (0.50-4.12)	0.63 (0.31-1.29)	1.63 (0.75-3.56)	0.97 (0.41-2.29)
Sex				
Female (ref)				
Male	2.13 (0.14-32.75)	0.29 (0.13-0.67)**	1.19 (0.26-13.86)	2.76 (0.34-22.45)
Place of residence				
Urban (ref)				
Rural	0.53 (0.18-1.61)	0.99 (0.55-1.80)	0.19 (0.05-0.69)*	0.75 (0.35-1.64)
Education level				
No formal education (ref)				
Primary and middle school	2.12 (0.60-7.48)	0.79 (0.40-1.57)	1.62 (0.63-4.13)	0.94 (0.40-2.16)
Secondary school	2.00 (0.52-7.62)	1.14 (0.57-2.30)	1.24 (0.44-3.52)	1.85 (0.72-4.75)
Graduate and higher	0.99 (0.15-6.57)	0.57 (0.19-1.66)	2.56 (0.86-7.60)	1.50 (0.38-5.91)
Occupational status				
Not employed (ref)				
Employed	0.80 (0.27-2.35)	0.81 (0.40-1.63)	1.41 (0.51-3.91)	1.03 (0.45-2.39)
Anti-tobacco advertising motivated to quit				
No difference/ Less likely to quit (ref)				
More likely to quit	3.98 (1.78-8.90)**	2.17 (1.22-3.86)**	3.12 (1.63-5.97)**	0.68 (0.32-1.43)
Health status				
Poor (ref)				
Average	0.28 (0.07-1.10)	0.58 (0.21-1.64)	0.23 (0.08-0.68)**	1.46 (0.58-3.69)
Good	0.38 (0.11-1.32)	0.49 (0.18-1.34)	0.33 (0.13-0.87)*	0.85 (0.33-2.21)
Excellent	0.06 (0.01-0.95)*	0.43 (0.13-1.46)	0.11 (0.02-0.55)**	0.71 (0.16-3.24)
Received HCP advice to quit				
No/NA (ref)				
Yes	2.27 (0.86-5.95)	1.72 (0.86-3.43)	2.45 (1.16-5.17)*	NA
Perceived that tobacco has damaged health				
No damage (ref)				
Little damage	0.55 (0.10-3.11)	0.73 (0.37-1.43)	0.53 (0.19-1.47)	1.20 (0.44-3.28)
A Lot of damage	4.26 (1.74-10.41)**	0.60 (0.32-1.13)	1.51 (0.79-2.87)	2.20 (1.10-4.39)*

a= The multivariable analysis was conducted employing multinomial logistic regression analysis

b= The multivariable analysis was conducted employing binary logistic regression analysis

TCP= Tobacco Control Policy India Survey; AOR= Adjusted Odds Ratio; CI= Confidence Interval; HCP= Healthcare provider; ref= Reference Category; NA= Not applicable; *p value <0.05; **p-value <0.01.

